

AMENDMENT UNDER 37 CFR § 1.116
Serial No. 09/899,265

REMARKS

A Request for Continuing Examination accompanies this amendment. Reconsideration of this application is therefore respectfully requested.

A total of 28 claims remain in the present application. The foregoing amendments are presented in response to the Office Action mailed April 14, 2005, wherefore reconsideration of this application is requested.

By way of the above-noted amendments, independent claims 1, 12 and 25 have been amended to more distinctly define features of the present invention. Claims 9, 16 and 26 have been cancelled in light of amended claims 1, 12 and 25; and the dependencies of claims 10, 17 and 27 amended in consequence of the cancellation of claims 9, 16 and 26.

In preparing the above-noted amendments, careful attention was paid to ensure that no new subject matter has been introduced. In particular, the independent claims have been amended to define that forwarding of LSAs is based on a forwarding policy which is "implemented on a per-router basis, such that different routers of the data network can have respective different forwarding policies". Support for this subject matter is found at paragraph 38 of the originally filed specification.

Referring now to the text of the Office Action:

- claims 1-6, 9-10, 12-22, 25-26 and 28-29 stand rejected under 35 U.S.C. § 102(e) as being anticipated by United States Patent No. 6,473,421(Tappan);
- claims 7-8, 23-24 and 30-31 stand rejected under 35 U.S.C. § 103(a) as being obvious in light of United States Patent No. 6,473,421(Tappan) in view of Applicant's admitted prior art; and
- claims 11, 18 and 27 stand rejected under 35 U.S.C. § 103(a) as being obvious in light of United States Patent No. 6,473,421(Tappan) in view of Applicant's admitted prior art, and further in view of United States Patent No. 5,265,092 (Soloway)

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It is believed that the Examiner's claim rejections are fully traversed by way of the above-noted amendments, and further in view of the following comments.

As described in the originally filed specification, "the present invention enables policy-based control over traffic forwarding within the autonomous system 2, by implementing policy-based control over the propagation of LSA messages. This policy-based control is implemented on a per-router basis, so that it is possible to define different forwarding policies for respective different routers." (See paragraph 38) "In accordance with an embodiment of the invention, an advertising router (e.g. ASBR 12 or an ABR 8) operates ... to define a route tag in respect of each LSA originating from the router. The route tag is attached to each LSA, and is used as a match criteria for policy-based forwarding of the LSA ..." (See Paragraph 42). Independent claims 1, 12 and 25 have been amended to emphasize these features of the present invention.

At page 7 of the Detailed Action, the Examiner correctly points out that Tappan teaches that the route flag field contains control flags which are used, in conjunction with the leading bit and format information (which are also contained in the route tag field – see FIG. 7), to control handling of a received LSA. This functionality is described at column 8, line 49 through Column 10, line 17, with reference to FIGs. 7-9. More particularly, Tappan teaches that:

When, as is the case in the scenario that FIG. 8 illustrates, the received or newly generated LSA is an AS-External LSA in which the External Route Tag field's first bit is zero and its Format part identifies it as containing an MPLS label, an area border router such as ABR2 that implements the present invention's teachings executes the FIG. 9 routine to determine whether to send the LSA to a given neighbor router as part of the flooding procedure. (Col 8, lines 39-46)

FIG. 9 details a routine implemented in an ABR which determines whether the LSA (in which the External Route Tag field's first bit is zero and its Format part identifies it as containing an MPLS label) should be forwarded (at 54) or discarded (at 60), or whether a filtered version of the LSA should be generated (at 56). As can be seen in FIG. 9, the content of the route tag field is primarily used to trigger execution of the routine, and also (via the control flag values) to indicate whether or not a filtered LSA should be generated. Beyond this, however, the decisions that govern the LSA message handling (i.e. blocks 50,

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52 and 58) rely on the content of fields other than the route tag field, such as the Link State ID, Advertising Router and Forwarding Address. Thus, it will be seen that while the content of the route tag field is used to control the handling of the LSA, this control is not effected by way of a forwarding policy having a match criteria corresponding to content of a tag field.

Furthermore, it will be seen that the routine of FIG. 9 is executed by every ABR, so that any differences in forwarding behaviours will be governed solely by differences in the content of the involved fields. Tappan does not teach or suggest that respective different routines may be implemented in different ABRs.

In light of the foregoing, it is respectfully submitted that Tappan fails to teach or fairly suggest all of the features of the present invention. In particular, Tappan does not teach or suggest that LSA forwarding is based on a forwarding policy having a match condition corresponding to a content of the tag field. Furthermore, Tappan does not teach or suggest that the forwarding policy is implemented on a per-router basis, such that each router can have a respective different forwarding policy.

Accordingly, it is believed that the presently claimed invention is patentable over the teaching of United States Patent No. 6,473,421 (Tappan). None of the other known prior art provides the missing teaching.

In particular, policy-based forwarding of subscriber traffic is very well known, as described in the background to the present invention. In fact, this functionality lies at the very heart of MPLS and OSPF protocols, among others. However, prior to the present invention, implementation of policy-based forwarding of LSAs was neither known nor contemplated, as evidenced by the fact that all of the cited prior art provide various methods for "enhanced" handling of LSAs (e.g. to improve network performance in some way), yet none are policy-based. That such policies should have match criteria corresponding to an asserted route tag value; and be implemented on a per-router basis, as provided by the present invention, diverge even further from the known prior art, and provide additional grounds or patentability.


In light of the foregoing, it is respectfully submitted that the presently claimed invention is clearly distinguishable over the teaching of the cited references, taken alone or

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in any combination. Thus, it is believed that the present application is in condition for allowance, and early action in that respect is courteously solicited.

If any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this response, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 19-5113.

Respectfully submitted,


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